CLAIMS

What is claimed is:

1. An apparatus for generating a vehicle control signal that controls a function of a vehicle device associated with a sensed event, the apparatus comprising:

a first sensor configured to provide a first sensor output signal having a first magnitude that approximately corresponds to the sensed event with a first level of accuracy;

a second sensor configured to provide a second sensor output signal having a second magnitude that approximately corresponds to the sensed event with a second level of accuracy that is less than said first level of accuracy;

a processor configured to receive said first sensor output signal and said second sensor output signal, and said processor being arranged to:

calculate a magnitude for the vehicle control signal based on an average of a weighted value of said first magnitude of said first sensor output signal and said second magnitude of said second sensor output signal;

generate the vehicle control signal with said magnitude; and

provide the vehicle control signal to the vehicle device for controlling the function of the vehicle device associated with the sensed event monitored by the first sensor and the second sensor in response to the vehicle output signal with said magnitude.

2. The apparatus of claim 1 wherein said first sensor is a first technology type and said second sensor is a second technology type other than said first technology type.

3. The apparatus of claim 2 wherein said first sensor is an analog sensor comprising at least one resistive element and said second sensor comprises a Hall Effect component.

4. The apparatus of claim 1 wherein one at least one of said first sensor and said second sensor comprise a giant magneto resistive component.

5. The apparatus of claim 1 wherein at least one of said first sensor and said second sensor is an analog sensor.

6. The apparatus of claim 1 wherein said first sensor and said second sensor monitor the displacement of an accelerator control mechanism that is configured to control a position of a throttle valve located in an air intake path of an internal combustion engine.

7. The apparatus of claim 1 wherein said processor is further arranged to:

calculate a difference between said first magnitude and said second magnitude;

compare said difference to a correlation threshold;

calculate said magnitude for the vehicle control signal based on the average of said weighted value of said first magnitude and said second magnitude if said difference is less than said correlation threshold; and

generate said vehicle control signal with said magnitude substantially equal to the lesser of said first magnitude and said second magnitude if said difference is greater than said correlation threshold.

8. The apparatus of claim 7 further wherein said processor is further configured to:

compare said first magnitude and said second magnitude;

provide said correlation threshold of a third magnitude if said first magnitude is greater than said than said second magnitude; and

provide said correlation threshold of a fourth magnitude if said first magnitude is less than said second magnitude.

9. The apparatus of claim 1 wherein said first sensor is coupled to said second sensor such that said first magnitude is changed substantially simultaneously with said second magnitude in response to the change in the sensed event.

10. The apparatus of claim 1 wherein said second magnitude has a second rate of change corresponding to the change in the sensed event, and said processor is further configured to:

sum said first magnitude and said second rate of change at a first time to produce a third magnitude;

determine if said first magnitude at a second time after said first time is greater than said third magnitude;

utilize said first magnitude at said second time during said calculation of said magnitude of said vehicle control signal if said first magnitude at said second time is less than said third magnitude; and

utilize said third value as said first magnitude during said calculation of said magnitude of said vehicle control signal if said first magnitude at said second time is less than said third magnitude.

11. The apparatus of claim 1 wherein said first magnitude has a first rate of change corresponding to the change in the sensed event, and said processor is further configured to:

sum said second magnitude and said first rate of change at a first time to produce a third magnitude;

determine if said second magnitude at a second time after said first time is greater than said third magnitude;

utilize said second magnitude at said second time during said calculation of said magnitude of said vehicle control signal if said second magnitude at said second time is less than said third magnitude; and

utilize said third value as said second magnitude during said calculation of said magnitude of said vehicle control signal if said second magnitude at said second time is less than said third magnitude.

12. The apparatus of claim 1 wherein said weighted value of said magnitude of said first sensor output signal is greater than one.

13. A method of generating a vehicle control signal that controls a function of a vehicle device associated with a sensed event, the method comprising the steps of:

producing a first sensor output signal having a first magnitude that approximately corresponds to the sensed event with a first level of accuracy;

producing a second sensor output signal having a second magnitude that approximately corresponds to the sensed event with a second level of accuracy that is less than said first level of accuracy;

calculating a magnitude for the vehicle control signal based on an average of a weighted value of said first magnitude of said first sensor output signal and said second magnitude of said second sensor output signal;

generating the vehicle control signal with said magnitude; and

providing the vehicle control signal to the vehicle device for controlling the function of the vehicle device associated with the sensed event monitored by the first sensor and the second sensor in response to the vehicle output signal with said magnitude.

14. The method of claim 13 wherein said first sensor is a first technology type and said second sensor is a second technology type other than said first technology type.

15. The method of claim 14 wherein said first sensor is an analog sensor comprising at least one resistive element and said second sensor comprises a Hall Effect component.

16. The method of claim 13 wherein one at least one of said first sensor and said second sensor comprise a giant magneto resistive component.

17. The method of claim 13 wherein at least one of said first sensor and said second sensor is an analog sensor.

18. The method of claim 12, further comprising the steps of:

calculating a difference between said first magnitude and said second magnitude;

comparing said difference to a correlation threshold;

calculating said magnitude for the vehicle control signal based on the average of said weighted value of said first magnitude and said second magnitude if said difference is less than said correlation threshold; and

generating said vehicle control signal with said magnitude substantially equal to the lesser of said first magnitude and said second magnitude if said difference is greater than said correlation threshold.

19. The method of claim 18, further comprising the steps of:

comparing said first magnitude and said second magnitude;

providing said correlation threshold of a third magnitude if said first magnitude is greater than said than said second magnitude; and

providing said correlation threshold of a fourth magnitude if said first magnitude is less than said second magnitude.

20. The method of claim 13, further comprising the step of changing said first magnitude substantially simultaneously with said second magnitude in response to the change in the sensed event.

21. The method of claim 13 wherein said second magnitude has a second rate of change corresponding to the change in the sensed event, and said method further comprising the steps of:

summing said first magnitude and said second rate of change at a first time to produce a third magnitude;

determining if said first magnitude at a second time after said first time is greater than said third magnitude;

utilizing said first magnitude at said second time during said calculation of said magnitude of said vehicle control signal if said first magnitude at said second time is less than said third magnitude; and

utilizing said third value as said first magnitude during said calculation of said magnitude of said vehicle control signal if said first magnitude at said second time is less than said third magnitude.

22. The method of claim 13 wherein said first magnitude has a first rate of change corresponding to the change in the sensed event, and said method further comprising the steps of:

summing said second magnitude and said first rate of change at a first time to produce a third magnitude;

determining if said second magnitude at a second time after said first time is greater than said third magnitude;

utilizing said second magnitude at said second time during said calculation of said magnitude of said vehicle control signal if said second magnitude at said second time is less than said third magnitude; and

utilizing said third value as said second magnitude during said calculation of said magnitude of said vehicle control signal if said second magnitude at said second time is less than said third magnitude.

23. An apparatus for generating an automobile control signal that controls a function of an internal combustion engine, the apparatus comprising:

a first sensor configured to provide a first sensor output signal having a first magnitude with a first level of accuracy that approximately corresponds to a displacement of an accelerator control mechanism;

a second sensor configured to provide a second sensor output signal having a second magnitude with a second level of accuracy that approximately corresponds to the displacement of the accelerator control mechanism;

a processor configured to receive said first sensor output signal and said second sensor output signal, and said processor being arranged to:

calculate a magnitude for the automobile control signal based on an average of a weighted value of said first magnitude of said first sensor output signal and said second magnitude of said second sensor output signal;

generate the automobile control signal with said magnitude; and

provide the automobile control signal to the internal combustion engine.